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EXAMINER	
DOTE, JANIS L	

ART UNIT	PAPER NUMBER
1756	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/609,399	KATOH ET AL.	
	Examiner	Art Unit	
	Janis L. Dote	1756	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 July 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17* is/are pending in the application.

4a) Of the above claim(s) *8-12* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7 and 13-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☒ Claim(s) *1-17* are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *01 July 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☒ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *10/1/03; 2/3/04;* 3/18/04; 4/06/04; 4/16/04; 4/28/04; 5/17/04; 12/13/04; 1/5/05
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

TS

1. Applicants' election with traverse of Group I, claims 1-7 and 13-17, in the reply filed on Jul. 11, 2005, is acknowledged. The traversal is on the ground(s) that the search for the invention of Group II would not place a serious burden on the examiner because the "[c]laims of Groups I and II appear to part of an overlapping search area."

This is not found persuasive. As set forth in the restriction requirement, the examiner has provided reasons why the toner and the apparatus in Group I are patentably distinct from the method of using in Group II. Applicants have not specifically indicated the errors in the restriction or specifically articulated why the reasons for restriction are inadequate. In addition, applicants have not provided any reasons why the toner and apparatus in Group I and the method of using in Group II are not patentably distinct, or stated on the record that the inventions of the two groups are obvious variations of each other.

Moreover, as set forth in the restriction requirement, the search for the toner and apparatus in Group I and the search for the method of using in Group II are not co-extensive. A search for the toner and the apparatus does not require a search in the method subclass 430/120. Nor does a search for the method in Group II require a search in the toner subclass 430/108.7 or a

search in the apparatus subclass 399/258. The distinct searches and the distinct issues of patentability establish the burden on the Office.

The requirement is still deemed proper and is therefore made FINAL.

2. Claims 8-12 have been withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicants timely traversed the restriction (election) requirement in the reply filed on Jul. 11, 2005.

3. The examiner has considered only the material submitted by applicants, i.e., copies of the originally filed claims, abstract, and figures, of the US applications listed in the "List of related cases" in the Information Disclosure Statements (IDS) filed on Feb. 3, 2004, Mar. 18, 2004, Apr. 6, 2004, Apr. 16, 2004, Apr. 28, 2004, and May 17, 2004.

The examiner has considered the US applications listed on the "List of related cases" in the IDS's filed on Dec. 13, 2004, and Jan. 05, 2005.

5. The "List of related cases" in the information disclosure statements filed on Oct. 1, 2003, and on Sep. 23, 2004, do not fully comply with the requirements of 37 CFR 1.98 because there are no copies of those portions of the copending U.S. applications which caused them to be listed present in the instant application.

Contrary to applicants' statements, the waiver of the copy requirement in 37 CFR 1.98 for cited pending U.S. patent applications was published in the Official Gazette on Oct. 19, 2004, after the IDS was filed on Sep. 23, 2004. See 1287 Off. Gaz. Pat. Office 163 (Oct. 19, 2004). The waiver was not retroactive.

Since the submission appears to be *bona fide*, applicant is given **ONE (1) MONTH** from the date of this notice to supply the above mentioned omissions or corrections in the information disclosure statement. NO EXTENSION OF THIS TIME LIMIT MAY BE GRANTED UNDER EITHER 37 CFR 1.136(a) OR (b). Failure to timely comply with this notice will result in the above mentioned information disclosure statement being placed in the application file with the noncomplying information **not** being considered. See 37 CFR 1.97(i).

4. The disclosure is objected to because of the following informalities:

The use of trademarks, e.g., Henschel mixer [sic: HENSCHEL MIXER] at page 21, line 15, has been noted in this application. The trademarks should be capitalized wherever they appear and be accompanied by the generic terminology. This example is not exhaustive. Applicants should review the entire specification for compliance.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

Appropriate correction is required.

5. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required:

In claim 5, the recitation "replenished toner composition has a charge quantity . . . when the replenished toner composition and the previously existing toner composition reach at least one of the doctor blade and the doctor roller"

(emphasis added) lacks antecedent basis in the specification. See page 9, lines 24-27, of the specification, which discloses that the replenished toner composition has a "charge quantity not less than 0.7 . . . before the replenished toner and the previously existing toner reach the regulating member" (emphasis added).

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1-7 and 13-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1-7 and 13-17 contain the trademark/trade name TURBULA. See the USPTO Trademark Electronic Search System (TESS) file for the trademark TURBULA, Serial No. 76610326, printed on Sep. 6, 2005. The specification at page 12, lines 9-11, defines "TURBULA mixer" as a commercially available TURBULA SHAKER MIXER T2F-10B-50A, manufactured by Willy A. Bachofen AG. However, where a trademark or trade name is used

in a claim as a limitation to identify or describe a particular material or product, the claim does not comply with the requirements of 35 U.S.C. 112, second paragraph. See *Ex parte Simpson*, 218 USPQ 1020 (Bd. App. 1982). The claim scope is uncertain since the trademark or trade name cannot be used properly to identify any particular material or product. A trademark or trade name is used to identify a source of goods, and not the goods themselves. Thus, a trademark or trade name does not identify or describe the goods associated with the trademark or trade name. In the present case, the trademark/trade name is used to identify/describe a particular mixer and, accordingly, the identification/description is indefinite.

Claim 5 is indefinite in the phrase "at least one of the doctor blade and the doctor roller" (emphasis added) for lack of unambiguous antecedent basis in claim 4, from which claim 5 depends. Claim 4 recites a regulating member. Claim 4 does not recite a doctor blade or a doctor roller.

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless -

> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f), or (g) prior art under 35 U.S.C. 103(a).

11. Claims 13-17 are rejected under 35 U.S.C. 102(b) as being anticipated by US 2001/0041083 A1 (Terazawa).

Terazawa discloses an apparatus for developing an electrostatic latent image on a photoconductive drum. See Fig. 1 and paragraphs 0051-0052. The apparatus comprises a photoconductive drum **8**, a toner replenishing device that comprises a toner container **2** and a toner delivering means **3**,

and a developing unit **1**. The toner container **2** stores toner to be replenished to the developing section **1** via the toner delivering means **3**. The developing section **1** comprises a mixing device that comprises two screws **5** and **6**, which each are rotated in a particular direction to agitate, i.e., mix, the toner and the carrier to prepare a developer. The two screws **5** and **6** meet the "two-axis screw" recited in instant claim 13. The developing section **1** further comprise a developing roller **7** that conveys the developer to the electrostatic latent image on the drum **8** to develop the latent image, and a doctor blade **9**, i.e., a regulating member, that regulates the amount of the developer on the developing roller **7**.

Terazawa does not disclose the use of the particular toner recited in the instant claims. However, the instant claims do not positively recite that the apparatus comprises the particular toner. Instant claim 13 merely recites "a replenishing device configured to replenish a toner," and "a mixing device configured to mix a carrier and the toner." The particular toner recited in the instant claims does not distinguish the structural elements in the instantly claimed apparatuses from those in the Terazawa apparatus. A material (i.e., the toner) worked upon by the apparatus does not limit the apparatus claims. "Inclusion of material or article worked

upon by a structure being claimed does not impart patentability to the [apparatus] claims." See MPEP 2115. It is well settled, as stated in Ex parte Masham, 2 USPQ2d 1647, 1648 (Bd. Pat. App. & Int. 1987) that "a recitation with respect to the material intended to be worked upon by a claimed apparatus does not impose any structural limitations upon the claimed apparatus which differentiates it from the prior art apparatus satisfying the structural limitations of that claimed." Accordingly, the particular toner recited in the instant claims does not distinguish the instantly claimed apparatus from the apparatus disclosed by Terazawa.

12. Claims 1-6 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over US 5,380,614 (Totsuka), as evidenced by applicants' admissions at page 8, lines 3-10, and page 14, line 26, to page 15, line 3, of the instant specification (applicants' admission I).

Totsuka discloses a two-component developer comprising a toner and a carrier. The toner comprises toner particles, whose surfaces comprise surface-treated alumina particles that are fixed to the surfaces and hydrophobic silica particles that are adhered to the surfaces. The surface-treated alumina particles

are surface-treated with dimethylsilicone and a fluoro-silicone-containing compound. Example 1 at cols. 8-9; and col. 11, lines 66-68. The Totsuka toner meets the toner compositional limitations recited in the instant claims.

Totsuka does not disclose that electrons are "shared" by the external additive and the toner particles as recited in instant claim 3. However, the instant specification at page 14, line 26, to page 15, line 3, discloses that "electron sharing" means "that a portion of the external additive having a volume of about 50% of the total volume of the external additive is embedded into and fixed to the surface portion of the toner particles." In example 1 of Totsuka, the surface-treated alumina particles are first mixed with the toner particles in a HENSCHEL mixer, wherein the alumina particles are adhered to the surface of the toner particles. See Fig. 2(A); col. 6, lines 33-38, and example 1. That composite powder mixture is then placed in a "surface reformer," a Nara hybridization system, where compression force and frictional force are applied to the composite powder mixture such that the alumina particles are fixed to the surface of the toner particles as shown in Fig. 2(B). Col. 6, lines 39-48, and example 1. Fig. 2(B) shows that the surface-treated alumina particles are embedded in the surface of the toner particles. Fig 2(B) appears to show that

about 50% by volume of the total volume of the alumina particles is embedded in the surface of the toner particle. Accordingly, because the Totsuka surface-treated alumina particles appear to be embedded in the surface of the toner particles in an amount of about 50% by volume of the total volume of the alumina particles, it is reasonable to presume that electrons are being shared between the toner particles and the surface-treated alumina particles as recited in instant claim 3. The burden is on applicants to prove otherwise. In re Fitzgerald, 205 USPQ 594 (CCPA 1980).

Totsuka also does not disclose that its toner satisfies the relationship recited in instant claims 1, 2, and 6. However, as discussed above, the Totsuka toner meets the compositional limitation recited in the instant claims 1, 2 and 6. The toner also appears to meet the "electron sharing" limitation recited in instant claim 3. The instant specification at page 8, lines 3-10, discloses that toners that satisfy the relationship recited in the instant claims have good charge properties and durability, and produce good images without causing problems in background fouling and toner scattering. According to Totsuka, its toner has superior charging properties, and provides a large number of images without the problems of increased fog density and toner scattering. Col. 1, line 64, to col. 2, line 2.

Totsuka discloses that the toner in example 1 exhibited stable charge properties after forming 5,000 copies. That toner also provided 5000 good quality images with stable image density and very little fogging, and with no generation of toner scattering. See Table 1 at col. 12, example 1. These properties appear to be the properties sought by applicants. Accordingly, because the Totsuka toner meets the compositional limitations recited in the instant claims and the toner appears to have the properties sought by applicants, it is reasonable to presume that the Totsuka toner satisfies the relationship recited in instant claims 1, 2, and 6. The burden is on applicants to prove otherwise. Fitzgerald, supra.

Totsuka does not disclose that its toner is used in a developing device that includes a toner replenishing section, such that "the replenished toner composition has substantially a same charge quantity as that of the toner composition . . ." as recited instant claims 4 and 5. However, the recitations in claims 4 and 5 are merely statements of intended use. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

See In re Casey, 152 USPQ 235 (CCPA 1967) and In re Otto, 136 USPQ 458, 459 (CCPA 1963). As discussed above, the toner disclosed by Totsuka meets the toner compositional limitations recited in the instant claims. Accordingly, the recitation of when the toner is used in a developing device that includes a toner replenishing section recited in instant claims 4 and 5 does not distinguish the toner recited in the instant claims from the toner disclosed by Totsuka.

13. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Totsuka, as evidenced by applicants' admission I, combined with US 5,340,677 (Baba).

Totsuka, as evidenced by applicants' admission I, discloses a developer comprising a toner and a carrier as described in paragraph 12 above, which is incorporated herein by reference.

Totsuka does not disclose a carrier as recited in instant claim 7. However, Toksuka teaches that "any carrier generally used in electrophotography may be employed." Col. 7, lines 36-38.

Baba teaches a carrier comprising magnetic core particles coated with a resin coating comprising a particular vinyl copolymer and a particular fluoro-containing polymer. The magnetic core particles comprise a binder resin and magnetic

particle dispersed in the binder resin. Confirmed by scanning electron microscopy (SEM), Baba discloses that the carrier core particles are "uniformly coated" with the resin coating. Col. 7, lines 57-60, and example 1 at col. 34, in particular col. 34, lines 53-57. According to Baba, its "carrier . . . requires no replenishment of carrier during running and also gives a superior developing performance and developer lifetime because of the stability of chargeability of toner during running and under variations of humidity." Col. 4, lines 59-68. The carrier has superior impact resistance, electric resistivity, and stability in imparting charge to toner over a long period of time. Col. 7, lines 46-55.

Baba does not explicitly disclose that "any portions of the material located on the carrier have a thickness in a range of from 75% to 12%% of an average thickness thereof" as recited in instant claim 7. However, as discussed above, Baba discloses that the carrier core particles in example 1 are "uniformly coated" with the resin coating confirmed by SEM. Baba rated the carrier surface of the carrier in example 1 as excellent, "AA." Baba did not report that the resin coating was uneven as reported for the carrier in comparative example 3. Table 2 at cols. 39-40. Accordingly, based on the information disclosed in Baba, it is reasonable to presume that the resin coating on

the magnetic core particles in the Baba carrier in example 1 meets the thickness limitation recited in instant claim 7. The burden is on applicants to prove otherwise. Fitzgerald, supra.

It would have been obvious for a person having ordinary skill in the art, in view of the teachings in Baba, to use the Baba carrier as the carrier in the developer disclosed by Totsuka. That person would have had a reasonable expectation of successfully obtaining a developer that has superior developing performance and developer lifetime as disclosed by Baba.

14. Claims 1-6 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Japanese Patent 03-116054, as evidenced by Totsuka and applicants' admissions at page 8, lines 3-10, and page 14, line 26, to page 15, line 3, of the instant specification (applicants' admission I). See the USPTO English-language translation of JP'054 for cites.

JP'054 discloses a two-component developer comprising a toner and a carrier. The toner comprises toner particles, whose surfaces are treated with negatively chargeable hydrophobic silica particles and positively chargeable hydrophobic silica particles. Translation, application Example 2 at pages 10-11. The negatively chargeable hydrophobic silica particles are mixed

with the toner particles and then subjected to a surface treatment with a hybridizer, which is manufactured by Nara Kikai Co., for over a five minute period. Accordingly to JP'054, the negatively chargeable silica particles are "firmly adhered" to the surface of the toner particles. Translation, page 5, lines 21-24. The JP'054 toner meets the toner compositional limitations recited in the instant claims.

JP'054 does not disclose that electrons are "shared" by the external additive and the toner particles as recited in instant claim 3. However, the instant specification at page 14, line 26, to page 15, line 3, discloses that "electron sharing" means "that a portion of the external additive having a volume of about 50% of the total volume of the external additive is embedded into and fixed to the surface portion of the toner particles." As discussed above, the negatively chargeable silica particles are first mixed with the toner particles and then the resultant mixture is subjected to a surface treatment with a hybridizer, which is manufactured by Nara Kikai Co., for a period of five minutes. Totsuka disclose that when toner particles comprising external particles present on the surface of the toner particles are placed in a "surface reformer," a Nara hybridization system, compression force and frictional force are applied to the toner particles such that the external

particles are fixed to the surface of the toner particles as shown in Fig. 2(B). Col. 6, lines 39-48. Fig. 2(B) shows that the external particles are embedded in the surface of the toner particles. Fig 2(B) appears to show that about 50% by volume of the total volume of the external particles is embedded in the surface of the toner particle. Accordingly, because the JP'059 negatively chargeable silica particles on the surface of the toner particles are subjected to a surface treatment with a Nara hybridizer over a five minute period, it is reasonable to presume the negatively chargeable silica particles are embedded in the surface of the toner particles in an amount of about 50% by volume of the total volume of the silica particles and that electrons are being shared between the toner particles and the negatively chargeable silica particles as recited in instant claim 3. The burden is on applicants to prove otherwise. Fitzgerald, supra.

JP'059 also does not disclose that its toner satisfies the relationship recited in instant claims 1, 2, and 6. However, as discussed above, the JP'059 toner meets the compositional limitation recited in the instant claims 1, 2 and 6. The toner also appears to meet the "electron sharing" limitation recited in instant claim 3. The instant specification at page 8, lines 3-10, discloses that toners that satisfy the relationship

recited in the instant claims have good charge properties and durability, and produce good images without causing problems in background fouling and toner scattering. According to JP'059, its toner exhibits high transfer efficiency as well as favorable fluidity and preservability. The toner provides images without density losses or fog during a continuous copying operation and without toner scattering. Translation, page 12, lines 11-16. JP'059 discloses that the toner in example 2 provided 100,000 images without density loss and without fog, and with no generation of toner scattering. The transfer efficiency of the toner was 93%. Translation, page 11, lines 2-13. These properties appear to be the properties sought by applicants. Accordingly, because the JP'059 toner meets the compositional limitations recited in the instant claims and the toner appears to have the properties sought by applicants, it is reasonable to presume that the JP'059 toner satisfies the relationship recited in instant claims 1, 2, and 6. The burden is on applicants to prove otherwise. Fitzgerald, supra.

JP'059 does not disclose that its toner is used in a developing device that includes a toner replenishing section, such that "the replenished toner composition has substantially a same charge quantity as that of the toner composition . . ." as recited instant claims 4 and 5. However, for the reasons

discussed in paragraph 12 above, which are incorporated herein by reference, the recitations in claims 4 and 5 are merely statements of intended use. As discussed above, the toner disclosed by JP'059 meets the toner compositional limitations recited in the instant claims. Accordingly, the recitation of when the toner is used in a developing device that includes a toner replenishing section recited in instant claims 4 and 5 does not distinguish the toner recited in the instant claims from the toner disclosed by JP'059.

15. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP'059, as evidenced by Totsuka and applicants' admission I, combined with Baba.

JP'059, as evidenced by Totsuka and applicants' admission I, discloses a developer comprising a toner and a carrier as described in paragraph 14 above, which is incorporated herein by reference.

JP'059 does not disclose a carrier as recited in instant claim 7.

Baba teaches advantages of using a carrier comprising magnetic core particles uniformly coated with a resin coating comprising a particular vinyl copolymer and a particular fluoro-

containing polymer. The discussion of Baba in paragraph 13 above is incorporated herein by reference.

It would have been obvious for a person having ordinary skill in the art, in view of the teachings in Baba, to use the Baba carrier as the carrier in the developer disclosed by JP'059. That person would have had a reasonable expectation of successfully obtaining a developer that has superior developing performance and developer lifetime as disclosed by Baba.

16. Claims 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Terazawa combined with Totsuka, as evidenced by applicants' admission I.

Terazawa discloses an apparatus for developing an electrostatic latent image on a photoconductive drum as described in paragraph 11, which is incorporated herein by reference. The Terazawa apparatus meets the structural components recited in the instant claims, but for the use of the particular toner recited in the instant claims.

However, Terazawa does not limit the type of developer used in its apparatus. Terazawa discloses that the toner container **2** in the replenishing device may store "any kind of toner applicable to an electrophotographic image forming process." Paragraph 0145, lines 1-3.

Totsuka, as evidenced by applicants' admission I, discloses a developer comprising a carrier and a toner as described in paragraph 12, which is incorporated herein by reference. The toner comprises toner particles, whose surfaces comprise surface-treated alumina particles that are fixed to the surfaces and the hydrophobic silica particles that are adhered to the surfaces. The Totsuka toner meets the toner compositional limitations recited in the instant claims. For the reasons discussed in paragraph 12 above, it is reasonable to presume that the Totsuka toner satisfies the relationship recited in the instant claims. The burden is on applicants to prove otherwise. According to Totsuka, its toner possesses superior positive charging properties, and provides a large number of images without the problems of increased fog density and toner scattering. Col. 1, line 64, to col. 2, line 2.

It would have been obvious for a person having ordinary skill in the art, in view of the teachings of Totsuka, to use the Totsuka toner and developer as the replenishing toner in toner container **2** and as the developer in developing unit **1**, respectively, in the apparatus disclosed by Terazawa. That person would have had a reasonable expectation of successfully obtaining an apparatus that provides a large number of images

without the problems of increased fog density and toner scattering.

Neither Terazawa nor Totsuka discloses that the "replenished toner has substantially a same charge quantity as that of the toner which previously exists in the mixing section when the replenished toner and the toner previously existing in the mixing section reach the regulating member" as recited instant claims 16 and 17. However, for the reasons discussed supra, the apparatus rendered obvious over the combined teachings of Terazawa and Totsuka meets all of the structural limitations recited in the instant claims. The recitation in instant claims 16 and 17 is merely functional language describing how the apparatus functions. The recitation does not distinguish the structural elements in the instantly claimed apparatus from those in the apparatus rendered obvious over the combine teachings of the cited prior art. "Claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function." MPEP 2114. "A claim containing a 'recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus' if the prior art apparatus teaches all the structural limitations of the claim." MPEP 2114, citing Ex parte Masham,

2 USPQ2d 1647 (Bd. Pat. App. & Inter. 1987).

17. Claims 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Terazawa combined with JP'059, as evidenced by Totsuka and applicants' admission I. See the USPTO translation of JP'059 for cites.

Terazawa discloses an apparatus for developing an electrostatic latent image on a photoconductive drum as described in paragraph 11, which is incorporated herein by reference. The Terazawa apparatus meets the structural components recited in the instant claims, but for the use of the particular toner recited in the instant claims.

However, Terazawa does not limit the type of developer used in its apparatus. Terazawa discloses that the toner container **2** in the replenishing device may store "any kind of toner applicable to an electrophotographic image forming process." Paragraph 0145, lines 1-3.

JP'059, as evidenced by Totsuka applicants' admission I, discloses a developer comprising a carrier and a toner as described in paragraph 14, which is incorporated herein by reference. The toner comprises toner particles, whose surfaces are treated with negatively chargeable hydrophobic silica particles and positively chargeable hydrophobic silica

particles. The JP'054 toner meets the toner compositional limitations recited in the instant claims. For the reasons discussed in paragraph 14 above, it is reasonable to presume that the JP'059 toner satisfies the relationship recited in the instant claims. The burden is on applicants to prove otherwise. According to JP'059, its toner exhibits high transfer efficiency as well as favorable fluidity and preservability. The toner provides images without the occurrence of density loss or fog during a continuous copying operation and without the occurrence toner scattering. Translation, page 12, lines 11-16.

It would have been obvious for a person having ordinary skill in the art, in view of the teachings of JP'059, to use the JP'059 toner and developer as the replenishing toner in toner container **2** and as the developer in developing unit **1**, respectively, in the apparatus disclosed by Terazawa. That person would have had a reasonable expectation of successfully obtaining an apparatus that provides images without the occurrence of density loss and fog during a continuous copying operation and without the occurrence of toner scattering.

Neither Terazawa nor JP'059 discloses that the "replenished toner has substantially a same charge quantity as that of the toner which previously exists in the mixing section when the replenished toner and the toner previously existing in the

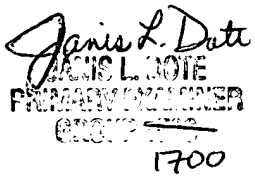
mixing section reach the regulating member" as recited instant claims 16 and 17. However, for the reasons discussed supra, the apparatus rendered obvious over the combined teachings of Terazawa and JP'059 meets all of the structural limitations recited in the instant claims. For the reasons discussed in paragraph 16 above, the recitation in instant claims 16 and 17 is merely functional language describing how the apparatus functions, and does not distinguish the structural elements in the instantly claimed apparatus from those in the apparatus rendered obvious over the combine teachings of the cited prior art.

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Janis L. Dote whose telephone number is (571) 272-1382. The examiner can normally be reached Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Mark Huff, can be reached on (571) 272-1385. The central fax phone number is (571) 273-8300.

Any inquiry regarding papers not received regarding this communication or earlier communications should be directed to Supervisory Application Examiner Ms. Claudia Sullivan, whose telephone number is (571) 272-1052.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



JLD
Sep. 11, 2005